Chemical Analyte Subcommittee Summary of Issues and Preliminary Recommendations

Presented by

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Anchor Environmental

RSET Meeting, March 16-17

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Chemical Analyte Subcommittee

- Brett Betts - Ecology
- Phil Fishella – USACE Walla Walla
- Taku Fuji – Hart Crowser
- Lyndal Johnson – NOAA Fisheries
- Steve Juul – USACE Walla Walla
- Roger McGinnis – Hart Crowser
- Greg Salata – Columbia Analytical
- Tim Sherman – USACE Portland
- Jennifer Sutter – Oregon DEQ

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Discussion Topics

- PCBs – Aroclors or Congeners?
- Chemical Screening Methods
- Modern Pesticides – Sediment Quality Concern?
- TPH – To Analyze or Not?
- Detection Limits, Chemical Summations, Analytical Constraints, etc.

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PCBs – Aroclors or Congeners?

Discussion Points

- Science is moving toward Congeners
- Existing SQGs expressed in Total PCBs – How to Correlate with Congeners?
- Which Congeners are Important? Human Health TEFs Established; Ecological TEFs Uncertain
- Methodology (Co-elution, Congener List, DLs, Cost Control)

Preliminary Recommendations

- Transition to Congener Analysis (refer to Policy Committee)
- Further Research on Analytical Methods

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Chemical Screening Methods

Discussion Points

- Interference, Sensitivity, Prediction Errors
- P-450 – Dioxin
- X-Ray Fluorescence (XRF) - Metals
- TPH – PAHs, Product Spills
- Others?

Preliminary Recommendations

- Best Suited for Large Sites with Limited Suite of Contaminants
- No Recommendation for Routine Use; Consider on Case-by-Case Basis

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Modern Pesticides – Sediment Quality Concern?

Discussion Points

- OP Pesticides, Carbamates, Triazines, etc.
- Lack of Correlation between Application and Presence in Surface Water
- Little or No SQGs Available
- Will They Persist?

Preliminary Recommendations

- Review USGS Studies on Usage Rates and Environmental Occurrence
- Evaluation Matrix: Koc, Half Lives, Detection Frequency, East vs. West

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TPH – To Analyze or Not?

Discussion Points

- Ecology Found No Reliable Correlation between TPH and Sediment Toxicity
- Many Variables Affect TPH Toxicity – Source, Age, Weathering, etc.
- Research on TPH Toxicity has been directed at Upland Sites, Not Sediments

Preliminary Recommendations

- Useful Analyte for Screening Sites with Petroleum Product, Tracing Plumes
- Unlikely to Develop a Reliable TPH SL

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Other Issues

- Analytical Constraints, Detection Limits – Awaits Finalization of Freshwater and Bioaccumulation SLs
- Chemical Summations – Status Quo OK
- Process to Add or Drop Analytes – TBD

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